SECTION 7100 - CHAIN LINK FENCING

7101 SCOPE. This specification covers chain link fencing and gates.

7102 FENCE TYPE. Fencing shall conform to the alignment and details shown on the drawings and shall consist of galvanized or aluminum-coated steel fabric, steel posts, top rail, and bottom rail or tension wire. Posts shall be set in concrete.

7103 MATERIALS. All steel or malleable iron parts and accessories shall be hot-dip galvanized or aluminum coated after fabrication.

Fabric	9 gauge, 2-inch mesh; galvanized ASTM A392, Class II or aluminum-coated ASTM A491, Class II.
Posts	Steel H-Section, 0.35 percent carbon; steel pipe, ASTM A120, standard weight (Schedule 40); or steel hollow structural tubing, ASTM A500 or A501.
Line Posts	
For 6-foot Fencing	H-Section 4.10 pounds per foot; 2 3/8 inch OD pipe, 3.65 pounds per foot; or 2 inch square, 3.85 pounds per foot.
For 42-inch Fencing	H-Section, 2.70 pounds per foot; or 1 7/8 inch OD pipe, 2.72 pounds per foot.
Terminal Posts	End, corner, and pull posts.
For 6-foot Fencing	2 7/8 inch OD pipe, 5.79 pounds per foot; or 2 1/2 inch square, 5.59 pounds per foot.
For 42-inch Fencing	2 3/8 inch OD pipe, 3.65 pounds per foot; or 2 inch square, 3.85 pounds per foot.
Gate Posts	Gate or leaf 6 foot or less, 2 7/8 inch OD pipe, 5.79 pounds per foot; or 2 1/2 inch square, 5.59 pounds per foot; gate or leaf over 6 foot, 4 inch OD pipe, 9.10 pounds per foot; or 3 inch square, 9.10 pounds per foot.
Top Rail	1 5/8 inch OD steel tubing, 1.40 pounds per foot.
Rail Couplings	Sleeve type, 6 inches long.
Post Tops (when barbed wires are required at the top of the fence)	Pressed steel, malleable iron, with pressed steel extension arm, or hole for top rail, designed to prevent entry of moisture into tubular posts.
Posts Tops	Pressed steel, malleable iron, or cast aluminum; designed to prevent entry of moisture into tubular posts.

Barbed Wire	Galvanized, ASTM A121, Class 2 or aluminum coated ASTM A585, Class II; two 12 1/2 gauge steel wires with 4 point barbs.
Stretcher Bars	Steel, 3/16 inch by 3/4 inch, or equivalent area.
Fabric Ties	Aluminum bands or wires.
Gate Frames	Steel tubing, 1 7/8 inch OD, 2.09 pounds per foot; or 2 inch square, 2.10 pounds per foot.
Tension Wire	Galvanized or aluminum coated coil spring wire, 7 gauge.
Handrail-Setting Cement	Hallemite "Por-Rok Cement".

7104 GATES. Gates shall be swing type, hinged to swing 90° from closed to open, complete with frames, latches, stops, keepers, hinges, and fabric. Gate leaves shall have intermediate members and diagonal truss rods as required for rigid construction. Joints between frame members shall be made by welding or by means of heavy fittings, and shall be rigid and water tight. Gate fabric shall be same as fence fabric and shall be attached to frame ends by stretcher bars, bolt hooks, or other mechanical means.

Hinges shall be heavy pattern with large bearing surfaces and shall not twist or turn under the action of the gate. Latches shall be plunger bar type, full gate height, and arranged to engage the gate stop, except single gates less than ten feet (10') wide may be provided with a forked latch. Latches shall be arranged for padlocking with the padlock accessible from both sides of the gate. Stops shall consist of a roadway plate with anchor set in concrete and arranged to engage the plunger. Keepers shall consist of mechanical devices for securing and supporting the free end of gates when in the full-open position.

Gates shall be installed so that they cannot be removed without disassembly of the hardware. Hardware attachment bolts shall be peened so that removal will be difficult.

7105 FENCE CONSTRUCTION. The installed fence shall conform to the alignment and finish grade indicated. All posts shall be plumb and unless otherwise shown or required shall be spaced ten feet (10') apart for 6-foot fencing and six feet (6') apart for 42-inch fencing. Where necessary, the fence grade shall be adjusted to fit the ground contour by slipping the fence fabric links. Ground surface irregularities shall be graded as required to maintain not more than a two inch (2") clearance below the bottom of the fence fabric.

Where posts are set in earth, concrete foundations thirty-six inches (36") deep shall be provided. If bedrock is encountered, post excavation shall be continued to the thirty-six inch (36") depth or eighteen inches (18") into the rock, whichever is less. Concrete foundations shall be circular in horizontal section, not less than ten inches (10") in diameter for line posts, and with a diameter not less than the post OD plus nine inches (9") for terminal and gate posts,

except that foundations in bedrock shall be a minimum of six inches (6") larger than the outside dimension of the post. Foundations shall extend above the ground surface and shall be crowned approximately one inch (1"). Concrete for foundations shall conform to the requirements of Section 2000 *Concrete*. Each foundation shall be cured for at least seventy-two (72) hours before further work is done on the post.

Top rails and bottom tension wires shall be installed before the fabric. Top rails shall be furnished in at least eighteen foot (18') lengths and shall be securely connected to gate and terminal posts. Tension wires shall be installed approximately six inches (6") above grade and shall be attached to each post and securely anchored at terminal and gate posts. Straight runs between braced posts shall not exceed 1500 feet. A terminal post shall be provided at each change in slope.

Fabric shall be attached to the top rail, bottom rail, and bottom tension wire at twenty-four inch (24") centers and to the line posts at fifteen inch (15") centers. Barbed wire shall be fastened to each extension arm by internal clips or external fabric ties. Each stretcher bar shall be threaded through the fabric and anchored to the post at fifteen inch (15") center by positive mechanical means.

Each gate and terminal post shall be braced by horizontal pipe brace and an adjustable truss extending to an adjacent line post. Corner posts shall be braced in both directions.

Fabrics shall be stretched taut and anchored so that a pull of 150 pounds at the middle of a panel will not lift the bottom of the fabric more than six inches (6").